REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

I. Status of the Claims

Claims 49, 51, and 54 are currently being amended. No new matter has been added with the amendments. Support for amended claims 49 and 51 can be found in the specification, for example on pages 3-4, 6, 20-21, and 37, and in the original claims as filed. Regarding claim 49, the phrase "modify beta-amyloid precursor protein processing" recited in the preamble and step (c) are supported by the specification by the disclosure on pages 3 and 37. Both pages describe beta-amyloid precursor protein processing. In addition, page 3 points to Tables 1-2, which describe that HDAC1 and SWI/SNF COMPLEX KDA SUBUNIT, respectively described as SEQ ID NO 10 and 15 on pages 4 and 6, are considered to be within the beta-amyloid precursor protein processing pathway. Claim 54 is being amended to correct a typographical error.

It is acknowledged that the amendments to the claims are made after final rejection. However, because the amendments do not introduce new matter, and because they either place the application in condition for allowance or at least in better condition for appeal, entry thereof by the Examiner is respectfully requested. After amending the claims as set forth above, claims 49-54 will be pending for examination on the merits.

II. Objection to the Declaration

Applicants note that the original declaration was objected to by the Examiner as being improper for failing to reference one of the priority documents and identifying an incorrect date of another. Applicants are preparing a corrected supplemental declaration for submission to the PTO shortly.

III. Claims 49-54 Meet the Written Description Requirement

Claims 49-54 are rejected under 35 U.S.C. 112, first paragraph, as allegedly lacking written description. Office Action, pp. 3-5. Specifically, the PTO interpreted the claimed "HDAC1" and "SWI/SNF COMPLEX KDA SUBUNIT" as being broader than the corresponding sequences concurrently recited in the claims, namely SEQ ID NO's 10 and 15, respectively. *Id* at 3-4 (stating that "[i]t is noted by the Examiner that the recitations of the SEQ ID NO's inside the parenthesis are interpreted to be examples of proteins "HDAC1" and "SWI/SNF COMPLEX KDA SUBUNIT"). Correspondingly, the PTO alleged that the specification does not provide a written description for HDAC1 and SWI/SNF COMPLEX KDA SUBUNIT that is not SEQ ID NO's 10 or 15. *Id.* Applicants respectfully traverse in light of the claim amendments.

Without acquiescing to the merits of the PTO's rejection and in the interest of advancing prosecution, Applicants have amended claim 49 as indicated *supra*. Hence, the claims now recite a method of screening one or more candidate molecules that modify beta-amyloid precursor protein processing by binding to a protein complex comprising SEQ ID NO: 10 and SEQ ID NO: 15, without reference to the terms HDAC1 and SWI/SNF COMPLEX KDA SUBUNIT. The claims as amended are supported by the specification, as exemplified on pages 4 and 6, which list and describe the sequences as they relate to the protein complex recited. Accordingly, the claims as currently amended are supported by the specification.

Applicants therefore respectfully request withdrawal of the written description rejection and submit that the claims are in condition for allowance.

IV. Claims 49-54 Are Enabled

Claims 49-54 are rejected under 35 U.S.C. 112, first paragraph, as allegedly lacking enablement. Office Action, pp. 5-7. The PTO acknowledges that the claims are enabled for a method of screening a molecule that binds to a protein complex comprising SEQ ID NO's 10 and 15, including exposing the complex or a cell or organism expressing the complex to one or more candidate molecules, determining whether the one or more molecules is bound to the

complex, and determining whether beta-amyloid precursor protein processing of the substrate is modified in the presence of the candidate molecule. *Id* at 5. However, the PTO alleges that the claims are not enabled for a method with "any complex" comprising HDAC1 protein and a SWI/SNF PROTEIN KDA SUBUNIT protein. *Id.* The PTO further alleges that the claims are interpreted to include HDAC1 and SWI/SNF PROTEIN KDA SUBUNIT and "any fragment thereof." *Id* at 6. Applicants respectfully traverse in light of the claim amendments.

Applicants direct the PTO to the response filed July 27, 2007, in which the terms "derivative," "fragment," and "variant" were removed with reference to HDAC1 and SWI/SNF PROTEIN KDA SUBUNIT. Response filed July 27, 2007, pg. 8. Moreover, without acquiescing to the merits of the PTO's rejection and to expedite prosecution of the present application, Applicants have amended the present claims as noted *supra*. The claims as currently amended are not directed at a method of screening candidate molecules that bind to "any complex," but to protein complexes that comprise specifically SEQ ID NO's 10 and 15. Accordingly, the claims are commensurate in scope with what the PTO has acknowledged as being enabled on page 5 of the outstanding Office Action.

Applicants therefore respectfully request that the enablement rejection be withdrawn and that the claims are in condition for allowance.

V. Claims 49-54 Are Not Anticipated

Claims 49-54 are rejected under 35 U.S.C. 102(b) as alleged being anticipated by Underhill et al. (*Journal of Biological Chemistry*, 2000) ("Underhill"). Office Action, pp. 7-9 (maintaining the rejection from the previous Office Action dated February 27, 2007). The PTO cites Underhill's description of two N-CoR complexes which allegedly bind to different proteins, including HDAC1 and SWI/SNF, as allegedly anticipating the present claims. Office Action of February 27, 2007, pg. 13, 1st full paragraph. Applicants respectfully traverse.

As described above, the present claims have been amended to delete the recitation of "HDAC1" and "SWI/SNF PROTEIN KDA SUBUNIT," thereby removing any doubt as to the scope of the claimed protein complex. As amended, the claims are directed to a method

of screening one or more candidate molecules that modify beta-amyloid precursor protein processing by binding to a protein complex comprising SEQ ID NO's 10 and 15. As supported by the specification, described *supra*, SEQ ID NO 10 corresponds to the HDAC1 protein and SEQ ID NO 15 corresponds to the SWI/SNF PROTEIN KDA SUBUNIT.

Underhill does not teach the claimed method. Nowhere in Underhill is there a description of a method for screening one or more candidate molecules that modify beta-amyloid precursor protein processing by binding to a complex comprising SEQ ID NO's 10 and 15. In fact, an examination of Underhill reveals that the reference does not even describe a protein complex that comprises both SEQ ID NO 10 and SEQ ID NO 15. The reference actually describes the discovery of components in N-CoR-1, which includes members of the SWI/SNF complex and HDAC3. Underhill, abstract and pg. 40466, Table 1. Underhill also teaches that N-CoR-1 is part of a broader N-CoR family, which includes N-CoR-2. *Id* at pg. 40464, left col., 3rd paragraph. However, N-CoR-1 and N-CoR-2 comprise different proteins, as exemplified by the statement that "the only HDAC found in the N-CoR-1 complex was HDAC3," while "[i]n contrast, N-COR-2 contained predominantly HDAC1 and HDAC2 as well as several other subunits that are found in the Sin3A•HDAC complex." *Id* at abstract; *see also* pg. 40469 (stating that "each complex [referring to N-CoR-1 and N-CoR-2] contains distinct proteins).

Moreover, Underhill never discloses amino acid sequences for any of the proteins or complexes described therein. However, one skilled in the art would recognize, as asserted above and in the previous response, that SEQ ID: 10 corresponds to HDAC1 and SEQ ID NO: 15 corresponds to the SWI/SNF PROTEIN KDA SUBUNIT. Accordingly, because Underhill teaches that N-CoR-1 and N-CoR-2 contain distinct proteins and neither include HDAC1 nor SWI/SNF proteins together in the same complex, Underhill does not teach a protein complex comprising SEQ ID NO's 10 and 15, as claimed. Hence, Underhill does not anticipate the claimed method of screening candidate molecules that modify beta-amyloid precursor protein processing by binding to a complex comprising both SEQ ID NO's 10 and 15.

Applicants therefore respectfully request withdrawal of the anticipation rejection and submit that the claims are in condition for allowance.

CONCLUSION

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By Michele M Simkin

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5538
Facsimile: (202) 672-5399

Michele M. Simkin
Attorney for Applicant
Registration No. 34,717